What is claimed is:

Claim 1: Analytical system for determining an analyte in a sample, the system comprising

a detection unit for detecting at least one signal that has been changed by an analyte in a sample and

an evaluation unit to determine at least one analyte in the sample based on the at least one signal and

a transport unit with a contact area wherein the contact area is suitable for directly or indirectly contacting the analytical system with a test element on which the sample can be applied and the transport unit comprises at least one piezoelectric element which vibrates the contact area of the transport unit and the test element is transported along a defined transport path in the analytical system as soon as the contact area of the transport unit is directly or indirectly contacted with a test element and the contact area is vibrated by the at least one piezoelectric element.

Claim 2: Analytical system as claimed in claim 1, which is used to analyse the test element wherein the test element comprises a carrier and an evaluation area on which the sample is applied.

Claim 3: Analytical system as claimed in claim 1, in which the test element is present in a magazine housing.

Claim 4: Analytical system as claimed in claim 1, in which a detection site is located in the analytical system along the transport path.

Claim 5: Analytical system as claimed in claim 1, comprising at least two piezoelectric elements that are electronically actuated independently of one another.

Claim 6: Analytical system as claimed in claim 1, in which the piezoelectric element is contacted with a detector and the detector is used to control the at least one piezoelectric element.

Claim 7: Analytical system as claimed in claim 6, in which the detector is a component of the detection unit.

Claim 8: Analytical system as claimed in claim 6, in which the detector detects the evaluation area of a test element.

Claim 9: Analytical system as claimed in claim 2, in which the contact area of the transport unit and the carrier of the test element are made such that in a resting state of the transport unit static frictional forces act between the contact area and the carrier to such an extent that the test element is fixed in position relative to the transport unit.

Claim 10: Analytical system as claimed in claim 1, in which the transport unit has a contact sensor which activates the transport unit when the test element contacts the contact area of the transport unit.

Claim 11: Analytical system as claimed in claim 1, in which the transport unit causes a carrier element to rotate which is suitable for bearing and positioning a reel.

Claim 12: Analytical system as claimed in claim 11, which is suitable for using a test strip tape wound onto the reel.

Claim 13: Method for transporting a test element in an analytical system comprising

contacting a test element directly or indirectly with a contact area of a transport unit in an analytical system, and prior thereto or subsequently

activating a piezoelectric element of the transport unit such that the contact area of the transport unit is vibrated,

transporting the test element due to the vibrated contact area along a predetermined transport path in the analytical system and

stopping the transport process of the test element such that the test element is positioned at a predetermined site in the analytical system.

Claim 14: Method as claimed in claim 13, in which the test element is positioned relative to a detection site of a detection unit of the analytical system.

Claim 15: Method as claimed in claim 13, in which the test element is returned into a magazine.

Claim 16: Method as claimed in claim 13, wherein the analytical system comprises a detection unit for detecting at least one signal that has been changed by an analyte in a sample and an evaluation unit to determine at least one analyte in the sample based on the at least one signal and the transport unit with the contact area wherein the contact area is suitable for directly or indirectly contacting the analytical system with a test element on which the sample can be applied and the transport unit comprises at least one piezoelectric element which vibrates the contact area of the transport unit and the test element is transported along a defined transport path in the analytical system as soon as the contact area of the transport unit is directly or indirectly contacted with a test element and the contact area is vibrated by the at least one piezoelectric element.

Claim 17: Analytical system for determining an analyte in a sample, the system comprising

a detection unit for detecting at least one signal that has been changed by an analyte in a sample,

an evaluation unit to determine at least one analyte in the sample based on the at least one signal, and

a transport unit with a contact area wherein the contact area is suitable for direct or indirect contact with a test element on which the sample can be applied and the transport unit comprises at least one piezoelectric element which vibrates the contact area of the transport unit and the test element is transported along a defined transport path in the analytical system as soon as the contact area of the transport unit is directly or indirectly contacted with a test element and the contact area is vibrated by the at least one piezoelectric element, wherein the transport of the test element is formed to be stopped such that the test element is positioned at a predetermined site in the analytical system.

Claim 18: Method for controlling a transport unit in an analytical system comprising

contacting a test element directly or indirectly by means of a test element carrier with a transport unit of an analytical system, the transport unit being able to transport the test element along a transport path in the analytical system,

transporting the test element along the transport path,

irradiating the test element or the test element carrier in a first wavelength range with a light source which is located along the transport path, and

detecting an optical change which is due to the test element or the test element carrier wherein the transport unit in the analytical system is controlled on the basis of the detected optical change.

Claim 19: Method as claimed in claim 18, in which the transport unit is controlled by a comparison of the registered detection value with at least one predefined detection value.

Claim 20: Method as claimed in claim 19, in which the test element transport is stopped as soon as a registered detection value falls above or below a predefined value.

Claim 21: Method as claimed in claim 19, in which at least two detection values are predefined which are compared with the registered detection values.

Claim 22: Method as claimed in claim 18, in which the test element transport is firstly slowed down before a transport stop occurs.

Claim 23: Method as claimed in claim 18, in which the light source emits light of less than 600 nm.

Claim 24: Method as claimed in claim 18, in which the transport of the test elements is initiated or stopped on the basis of the registered detection value.

Claim 25: System for controlling a test element transport comprising

a transport unit which is able to transport a test element along a transport path within an analytical system either directly or indirectly by means of a test element carrier,

a light source which is located in the analytical system along the transport path such that a test element or test element carrier which is transported along the transport path is irradiated in a first wavelength range and

a detector for detecting an optical change which is caused by the test element or the test element carrier wherein the transport unit is contacted with the detector and the transport unit is controlled as a function of the signal detected by the detector.

Claim 26: System as claimed in claim 25, in which the transport unit is contacted with the detector via a control unit.

Claim 27: System as claimed in claim 26, in which the control unit comprises a storage unit in which at least one predefined detection value is stored and the transport unit is controlled by comparing the detected detection value with the preset detection value.

Claim 28: System as claimed in claim 25, which is suitable for evaluating a test field of a test element.

Claim 29: System as claimed in claim 28, in which a test field is optically evaluated using the detector and/or the light source that are provided for controlling the transport unit.

Claim 30: System as claimed in claim 25, comprising a test element which has a test field for an analyte determination and the test field is detected in order to control the transport unit.

Claim 31: System as claimed in claim 25, comprising a test element with a mark which is detected to control the transport unit.

Claim 32: System as claimed in claim 31, in which the mark has a reflectance value normalized against white of less than 0.2.

Claim 33: System as claimed in claim 31, in which the mark is formed by a recess in the test element.